7 Radius Layout

Layouts for Square Drives/Approaches

Layouts for Skew Drives/Approaches

CHAPTER SEVEN:
RADIUS LAYOUT

The layout of a radius point may be done by a single person with a steel, fiberglass, or cloth tape. Since a cloth tape is subject to stretching or shrinking, depending upon the age and/or weather conditions, a steel or fiberglass tape is preferred.

LAYOUTS FOR SQUARE DRIVES/APPROACHES

The procedure used for determining a layout for a square drive or approach (Figure 7-1) is as follows:

1) Determine the intersecting point of the driveway or approach (station number) and the width of the drive or approach.

2) Measure one half of the drive width along the edge of pavement from the intersecting point and mark this as point A.

3) Measure the radius distance from point A along the edge of pavement and mark this as point B.

4) Measure the radius distance from point B perpendicularly (Figure 7-2) and mark this as point C, which is the radius point.

A chaining pin is used first to mark point C. If the radius fits when the radius distance is swung from this point, a hub with a nail may be set to mark the point. If the radius does not fit, point C may be adjusted by moving the chaining pin and rechecking before driving the hub. After the hub is set, the radius may be set by hooking the end of the tape over the nail. (Figure 7-1)
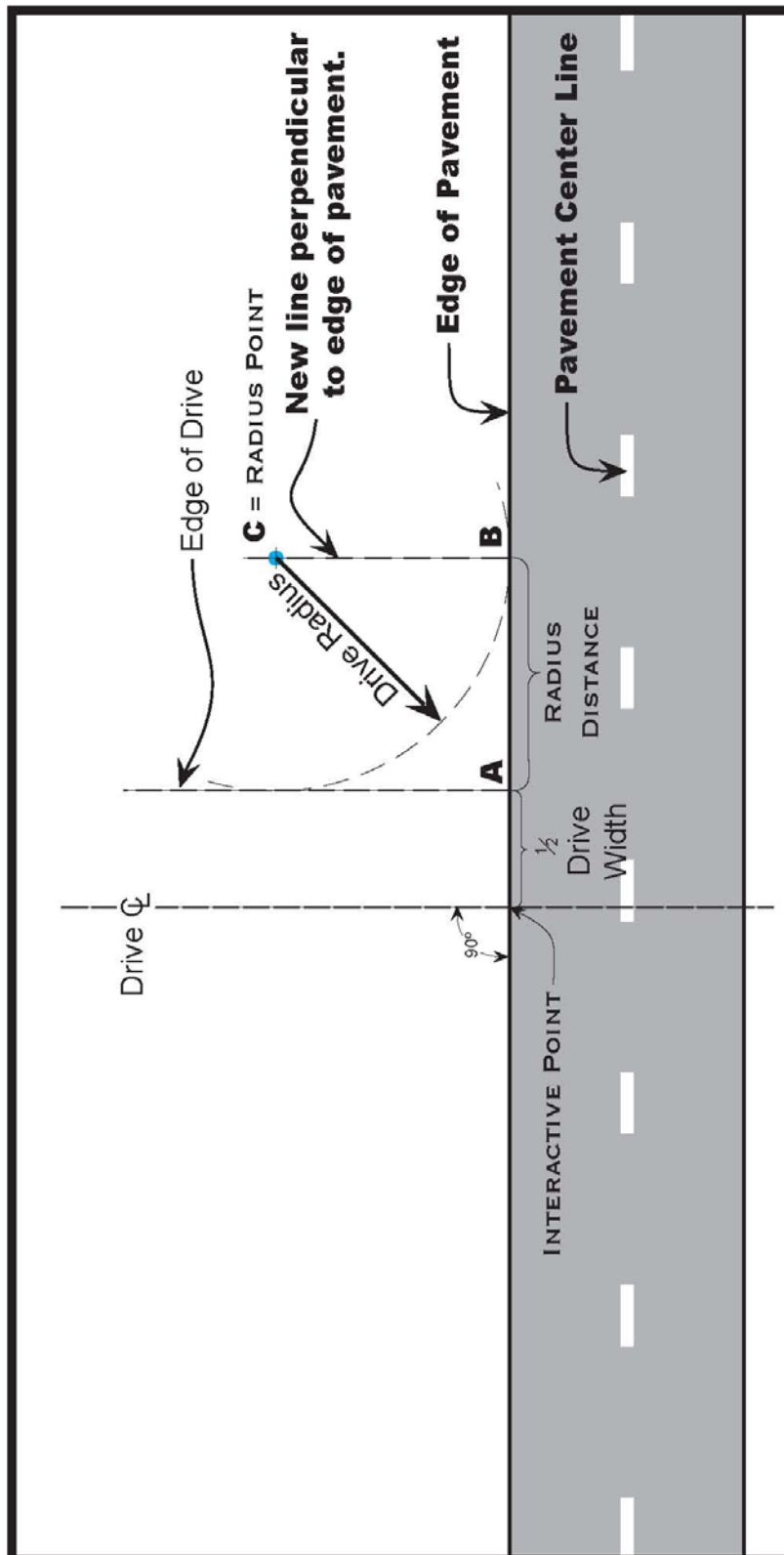
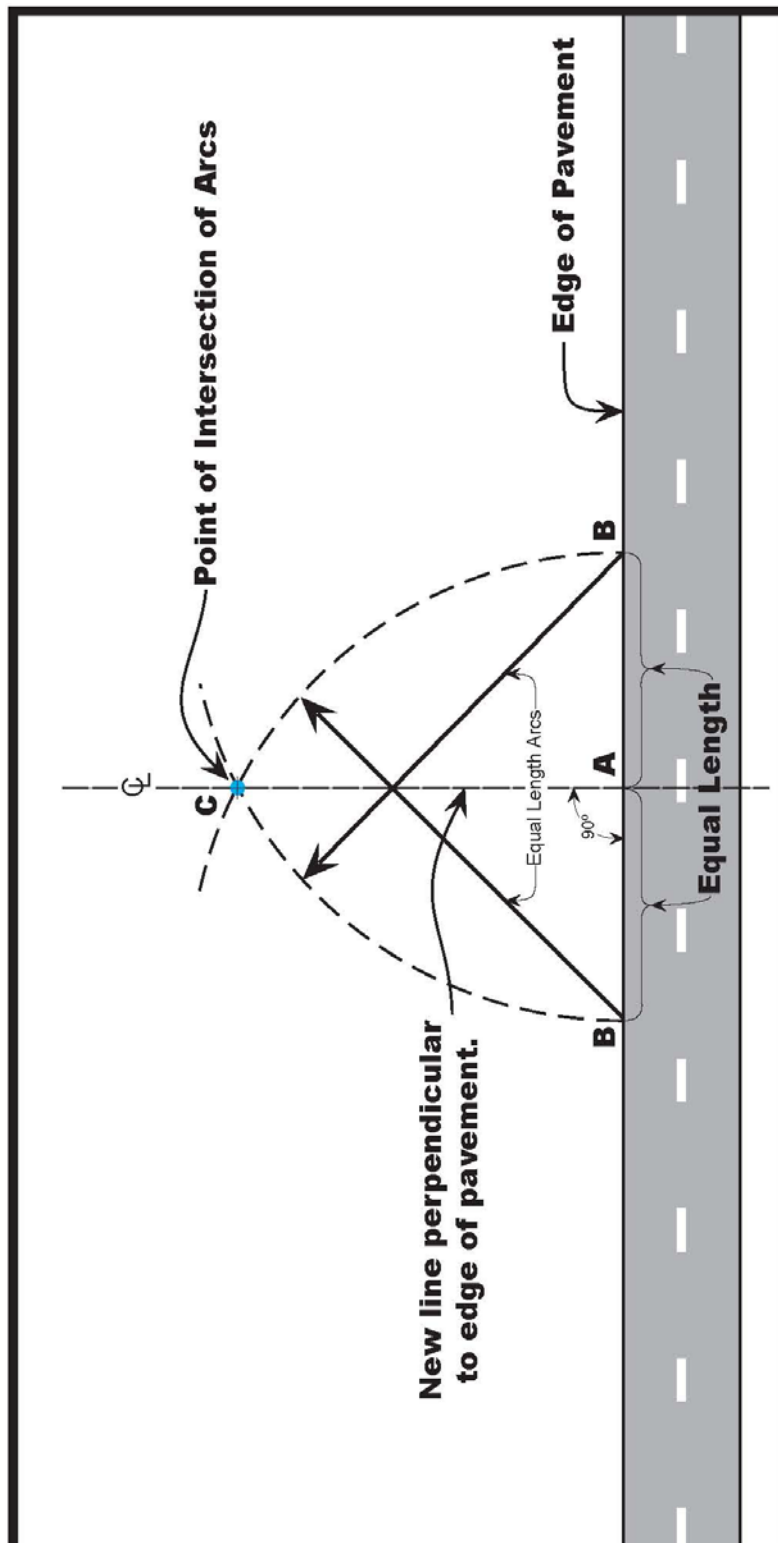**Figure 7-1. Radius Layout for Square Drive/Approach**

Figure 7-2. Determining Radius Point

LAYOUTS FOR SKEW DRIVES/APPROACHES

Driveways and approaches on skew angles are determined as indicated in Figure 7-3.

Standard Drawings **E 610-DRI**V and **E 610-PRAP** indicate examples of drives and approaches

Example:

A new road is being constructed in an East-West direction. A Class II Drive intersects the new pavement on the north side at Station 49+75 at a 90 degree angle. The radius is 15 ft on the west side and 25 ft on the east side. The drive width is 14 ft. Set the radius points.

1) Find Station 49+75 on the north edge of pavement.

2) Measure 7 ft (one half of the total width of the drive) each direction from Station 49+75. Mark these points to use for sight lines.

3) Add the radius distance to the 7 ft previously measured;

   15 ft +7 ft = 22 ft from centerline of drive on west side
   25 ft +7 ft = 32ft from centerline of drive on east side
   Mark these points on the edge of the mainline pavement

4) Measure out the radius distance on each side from the edge of the pavement (15 ft on west and 25 ft on east). Mark the point temporarily with a flag or nail.

5) Swing in the radius for each side and check for the line with points marked as 7 ft on the right and left of the driveway.
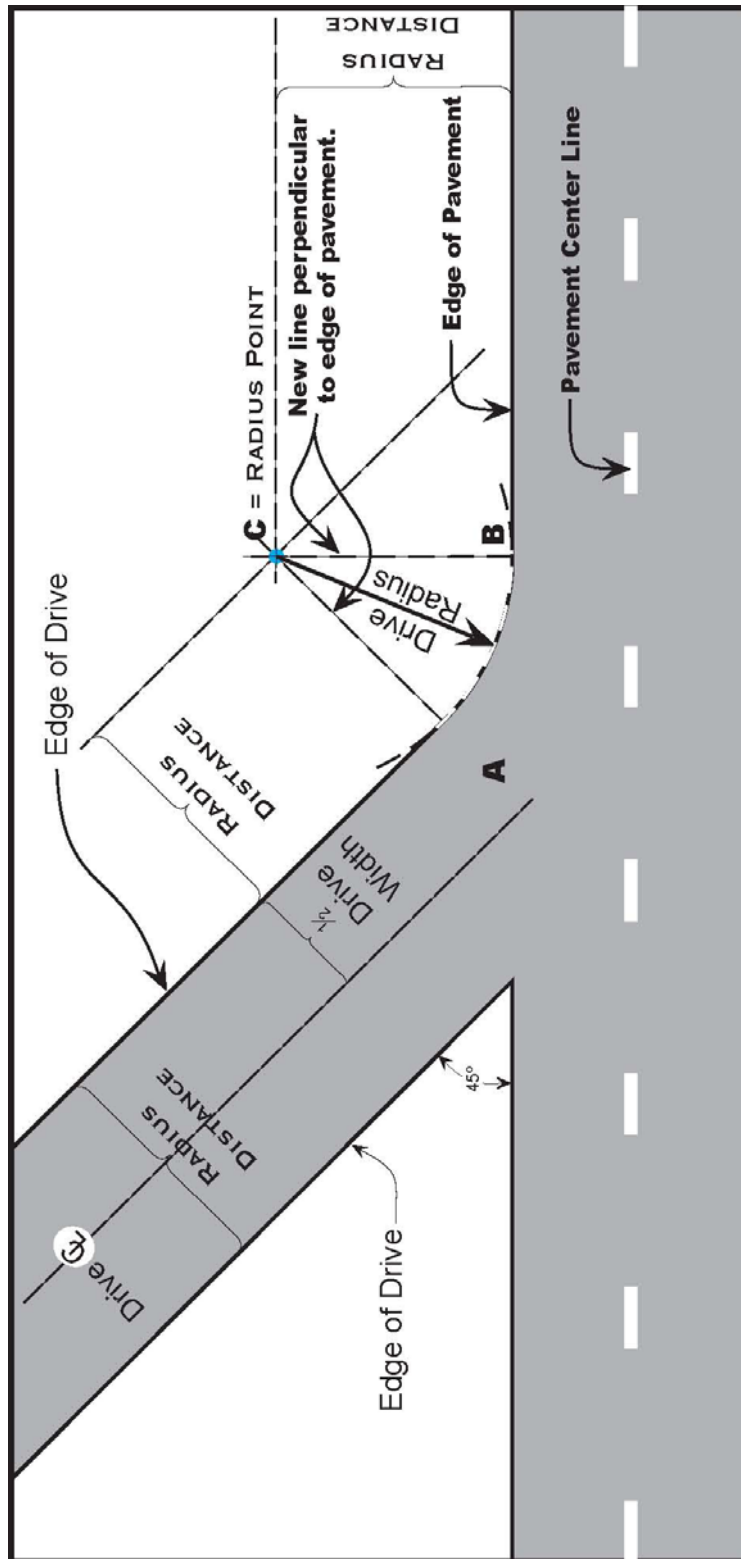
6) If the line looks good and the width checks, set the hubs for the radius points.

Figure 7-3. Drive/Approach on Skew Angle